

Track Light Installation Guide



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PHYSICAL REQUIREMENTS

Before installing the Midmark Track Light, ensure the physical room requirements outlined in Figure 1 are met.

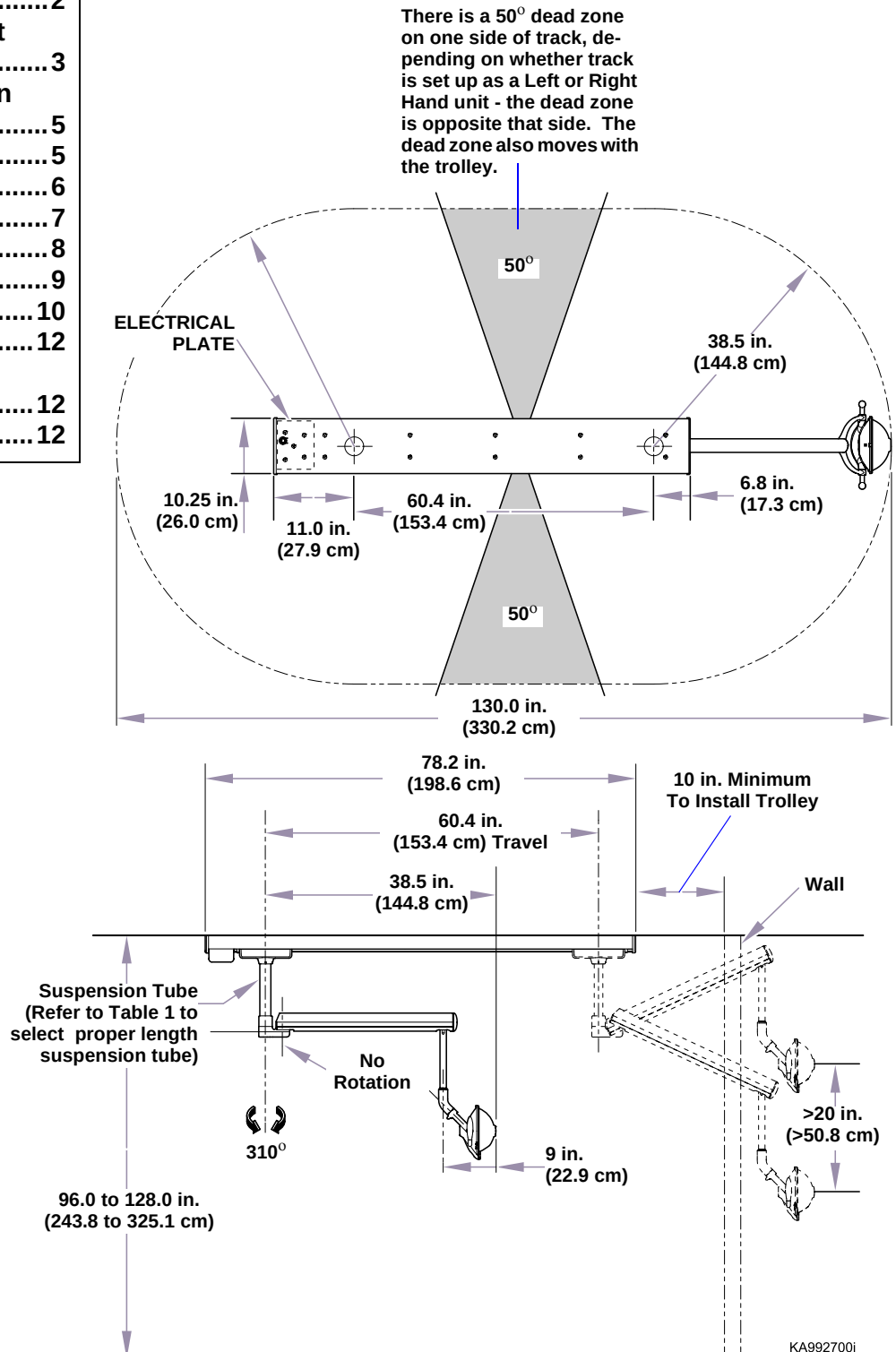


Figure 1. Physical Requirements

TRACK LIGHT**RECOMMENDED MOUNTING LOCATIONS****EQUIPMENT ALERT**

The orientation and position of the track mounted light in relation to the chair is critical. Reference Figure 2 to ensure track light is installed in proper location / orientation.

Figure 2 shows the recommended mounting location for the track light. Please follow the recommendations to ensure optimal use and positioning of lighthead.

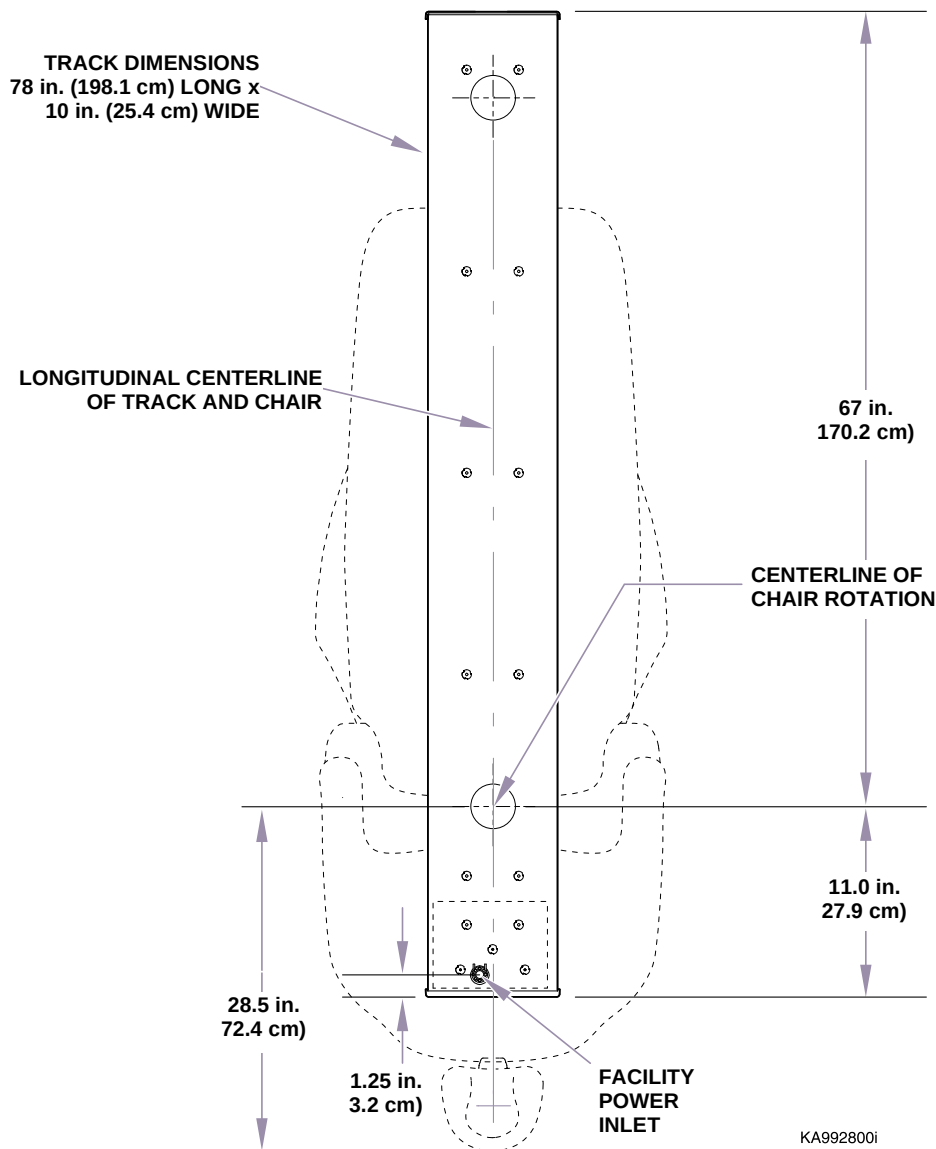


Figure 2. Recommended Mounting Locations

SUGGESTED CEILING SUPPORT STRUCTURE

NOTE

Midmark does not supply the ceiling support structure; the illustrations in Figure 3 are for suggestion only. Consult a qualified professional to install the appropriate support structure for the facility. The weight and torque values listed below apply only to the track system; not the ceiling support structure.

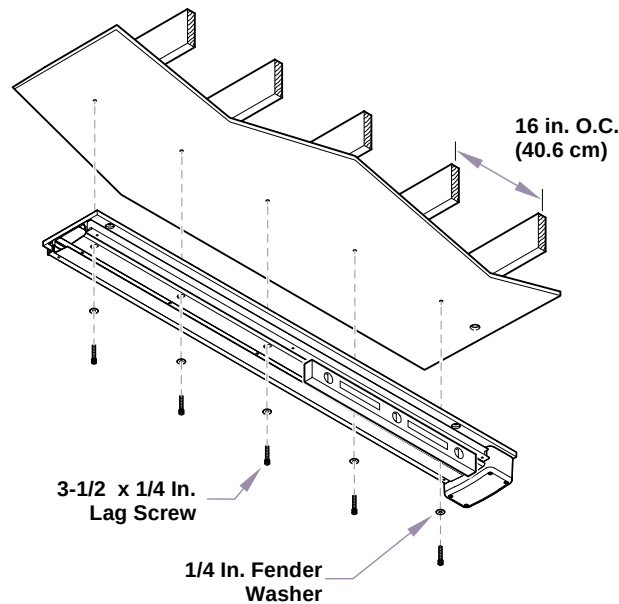
The ceiling support structure **is not** provided by Midmark. The ceiling support structure must be capable of supporting:

Track System (only)

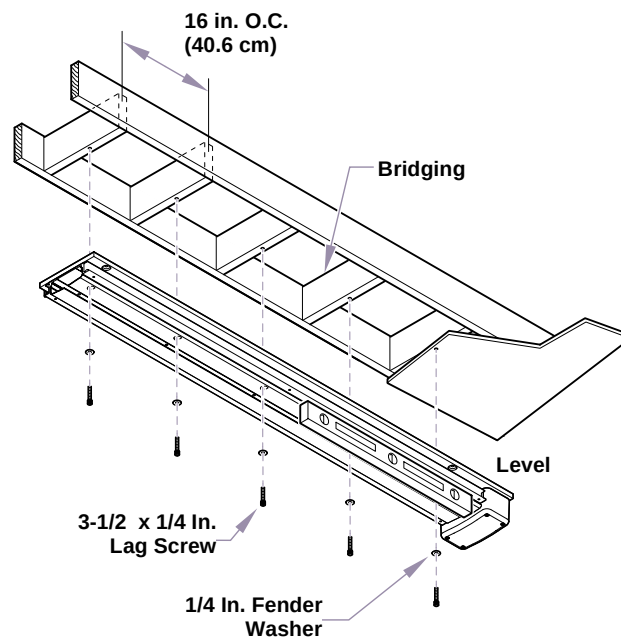
Weight (Max.):..... 78 lbs (35.4 kgs)
Torque (Max.):..... 25 ft-lbs. (33.9 N·m)

In addition to supporting the above listed weights, the ceiling support structure must also be able to support the track light without deflection. To prevent the suspension arm from drifting, the track assembly must deflect no more than 1/16 in. (1.6 mm) over a 12 in. (30.5 cm) distance.

For installations perpendicular to joists (New or existing construction)



For installations parallel to joists (New construction)

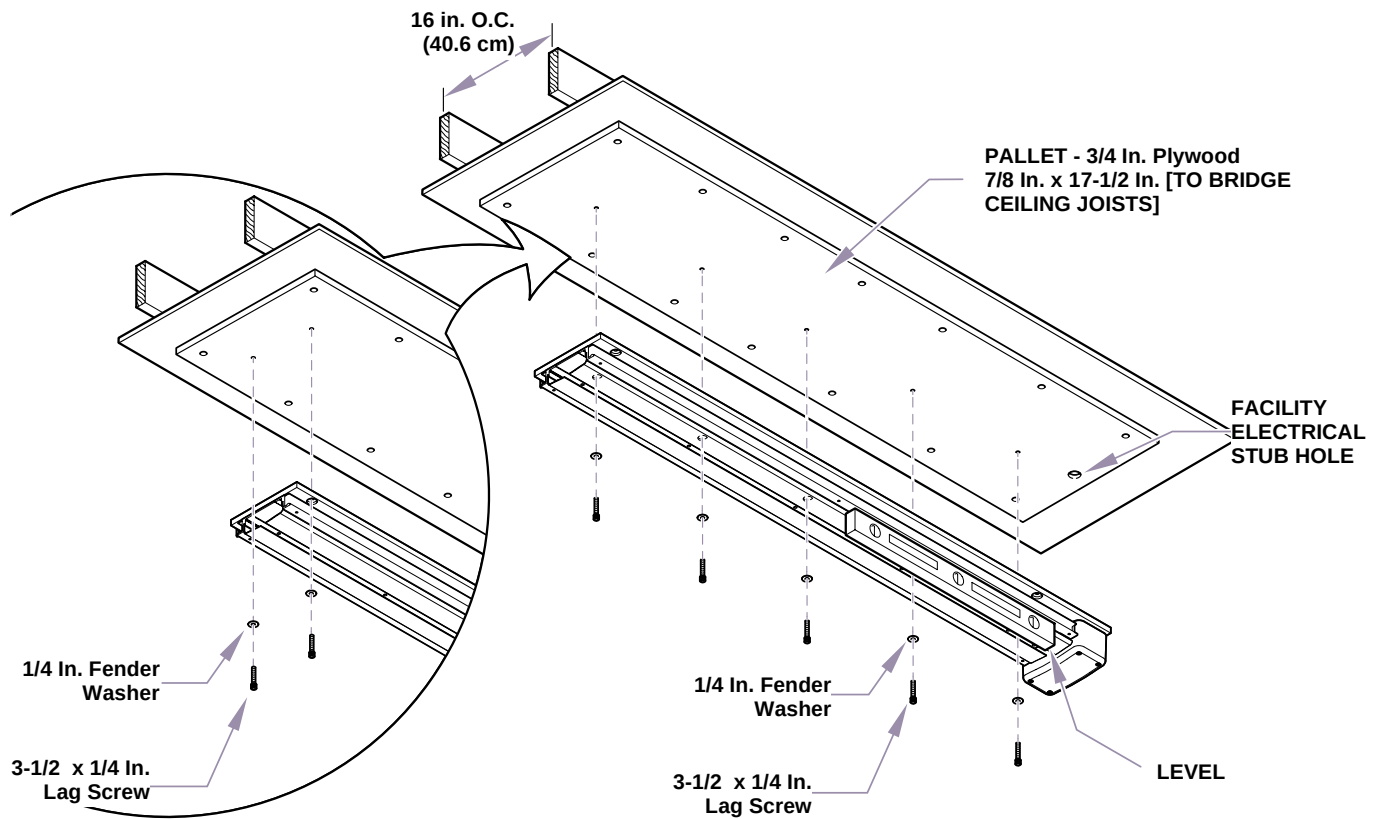


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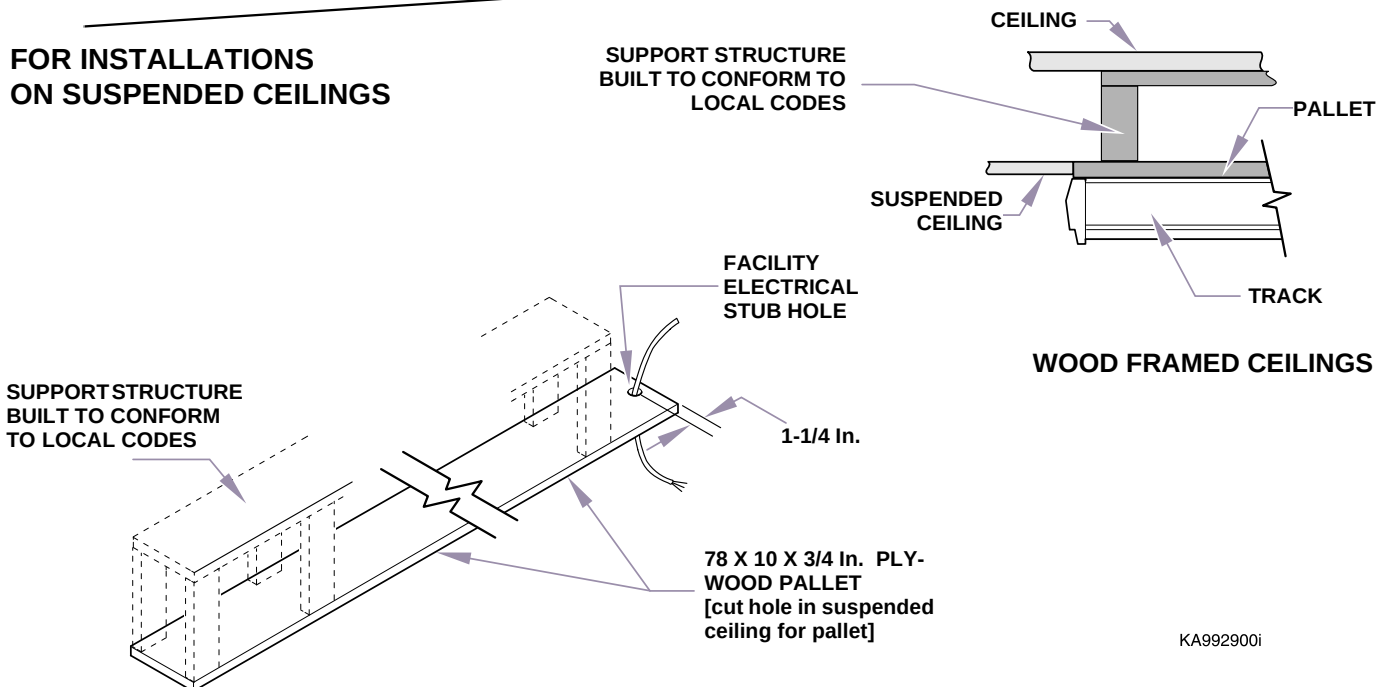
Figure 3. Recommended Ceiling Support Structure

TRACK LIGHT

FOR INSTALLATIONS PARALLEL TO JOISTS (EXISTING CONSTRUCTION)



FOR INSTALLATIONS ON SUSPENDED CEILINGS



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Figure 3. Recommended Ceiling Support Structure - Continued

RECOMENDED SUSPENSION TUBE SELECTION

Table 1. Suspension Tube Recommendations

Mounting Height	Suspension Tube Kit [includes wire harness(es), & hardware]	Suspension Tube Length
<96 in. (243.8 cm) [*]	153651-001 [*]	10.25 in. (26.0 cm) [*]
96 to 98 in. (243.8 to 248.9 cm)	153651-002	14.25 in. (36.2 cm)
99 to 102 in. (251.5 to 259.1 cm)	153651-003	18.25 in. (46.3 cm)
103 to 106 in. (261.6 to 269.2 cm)	153651-004	22.25 in. (56.5 cm)
107 to 110 in. (271.8 to 279.4 cm)	153651-005	26.25 in. (66.7 cm)
111 to 114 in. (281.9 to 289.5 cm)	153651-006	30.25 in. (76.8 cm)
115 to 118 in. (292.1 to 299.7 cm)	153651-007	34.25 in. (87.0 cm)
119 to 122 in. (302.3 to 309.9 cm)	153651-008	38.25 in. (97.1 cm)
123 to 126 in. (312.4 to 320.0 cm)	153651-009	42.25 in. (107.3 cm)
>126 in. (320.0 cm)	153651-010	46.25 in. (117.5 cm)

(*) Flex arm will contact track with this configuration

TRACK FRAME PREPARATION

(1) Remove two screws (1, Figure 4) and end cap (2) from track (3).

(2) Unscrew two bumpers (4) from track (3).

(3) Remove trolley assembly (5) from track (3).

(4) Remove four screws (6) and transformer cover (7) from track (3).

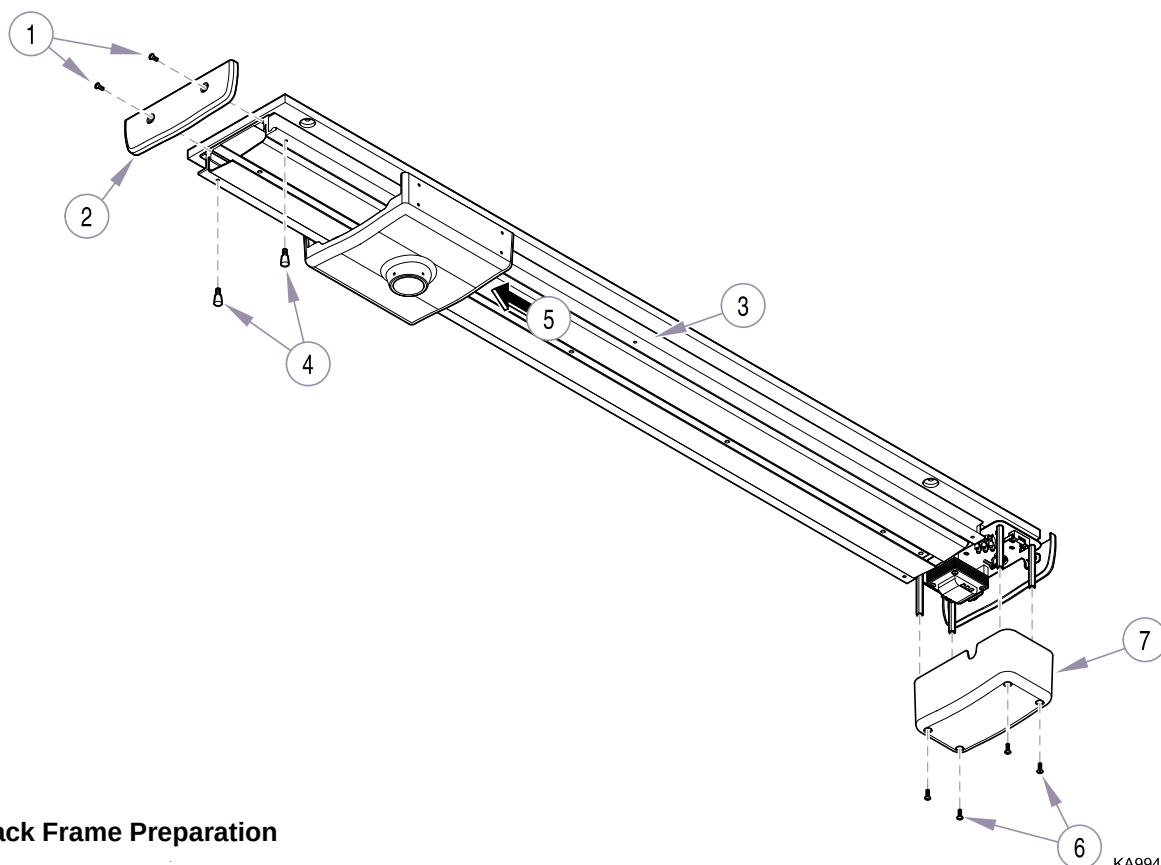


Figure 4. Track Frame Preparation

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TRACK LIGHT

TRACK FRAME INSTALLATION

NOTE

When performing next step, be sure electrical stub (3) is routed thru track to transformer connection area.

- (1)** Position track assembly (1, Figure 5) on ceiling support structure (2) and secure with four 3-1/2 X 1/4 In. screws (A) or five 3-1/2 X 1/4 In. screws (B) and 1/4 In. oversized fender washers. Shim as necessary to level the track assembly.

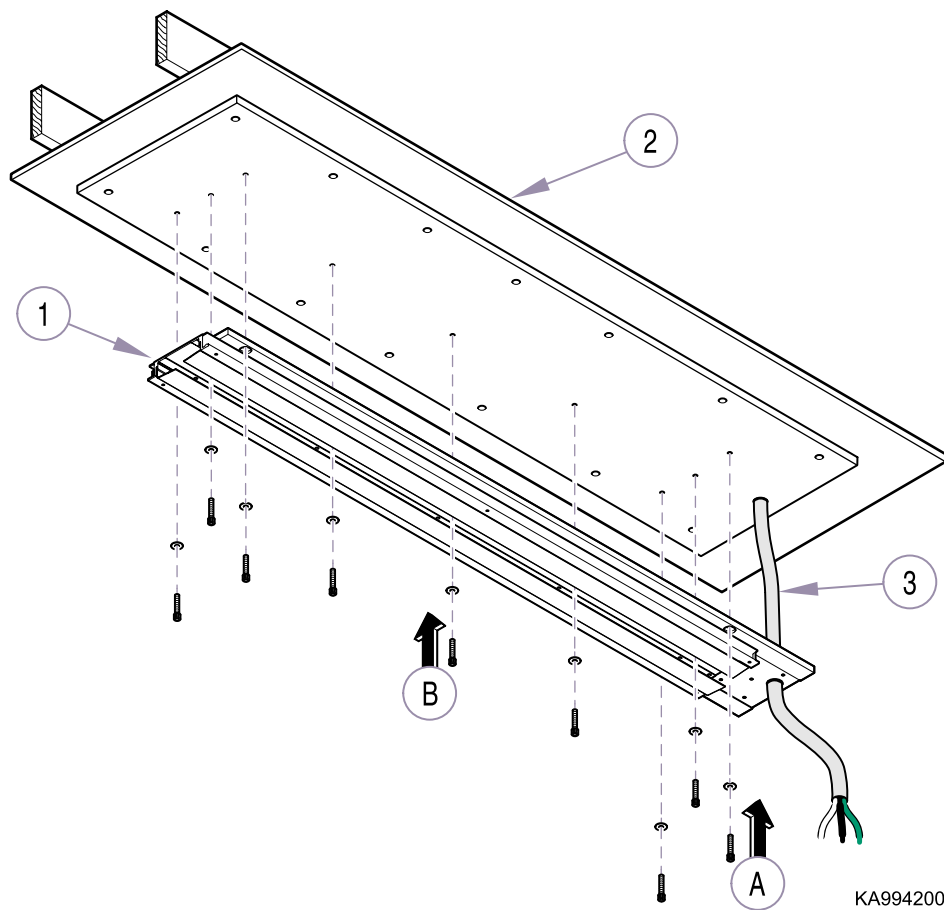


Figure 5. Track Frame Installation

TROLLEY INSTALLATION

**WARNING**

Ensure clevis pin (5, Figure 6) is installed in place and is secure. Failure to do so could allow light arm to separate from trolley, resulting in serious personal injury to patient or staff.

**EQUIPMENT ALERT**

For LH installations, the window (A, Figure 6) in suspension tube (4) should be facing **opposite** the harness bracket (2). For RH installations, the window (A) in suspension tube (4) should be facing **toward** the harness bracket (2).

- (1) Remove two screws (1, Figure 6) and temporarily separate harness bracket (2) from trolley (3).
- (2) Install suspension tube (4) on trolley (3) and secure with clevis pin (5). Then, tighten two setscrews (6).
- (3) Position harness bracket (2) on trolley (3) and secure with two screws (1).
- (4) Position trolley (3) near end of track (7); then connect track harness (8) to trolley receptacle (9).
- (5) Install trolley (3) on track (7); it can only be installed one way.
- (6) Install end cap (2, Figure 4) on track (3) and secure with two screws (1).
- (7) Install two bumpers (4) on track (3).

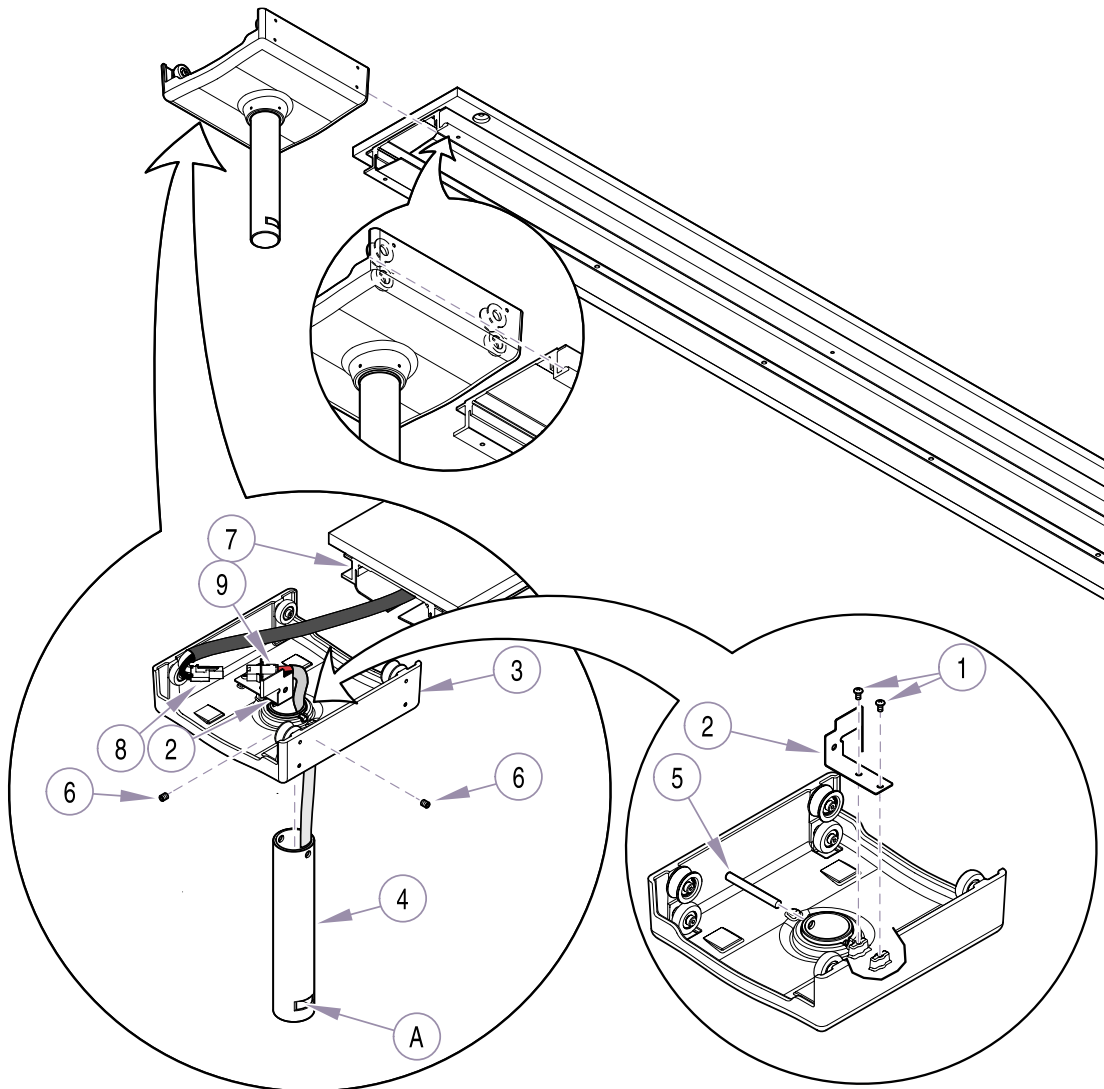


Figure 6. Trolley Installation

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TRACK LIGHT**LIGHT & ARM INSTALLATION**

- (1)** Install collar (1, Figure 7) onto suspension tube (2). Lightly tighten setscrew (3) to temporarily hold collar in place.

NOTE

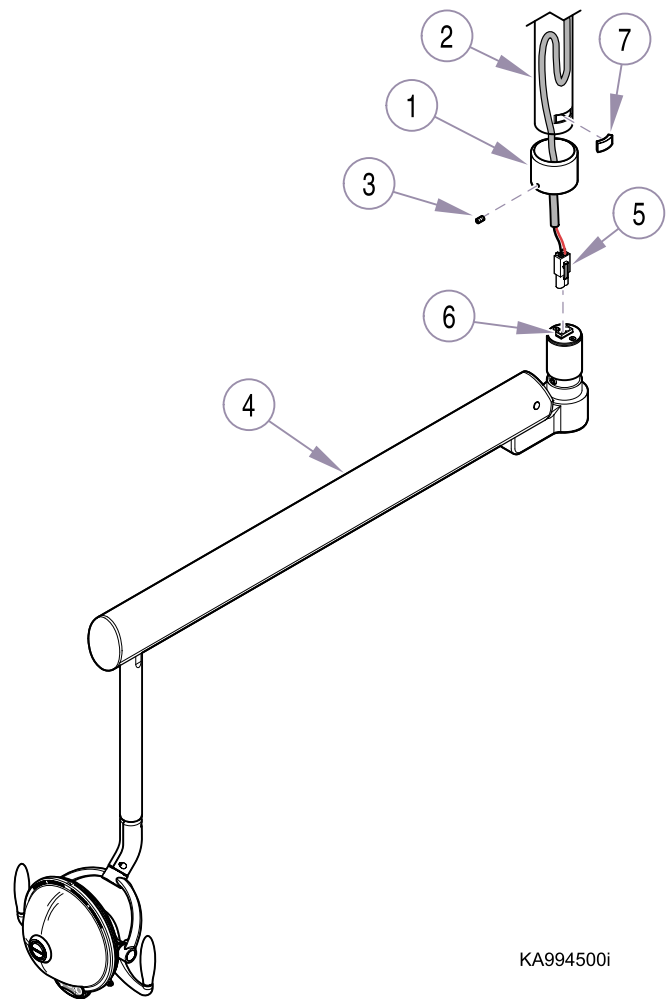
During the following step, fold excess length of wire harness and push it up into suspension tube as shown.

- (2)** Position light assembly (4) near suspension tube (2); then connect trolley harness (5) to light assembly harness (6).

**EQUIPMENT ALERT**

To ensure quiet operation, apply a thin coat of lubricant (included w/light) to inside of suspension tube (2) and bearing shaft of light arm assembly (4) before performing the following step.

- (3)** Insert light assembly (4) into suspension tube (2) and secure with key (7).
- (4)** Loosen setscrew (3), slide collar (1) down over key (7) and then re-tighten setscrew (3) to secure in place.



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Figure 7. Light & Arm Installation

WIRING CONNECTIONS

- (1)** If not already done, feed facility wiring (1, Figure 8) down thru wiring clamp (2).
- (2)** Connect three wires (1) [from facility] to three terminals of terminal block (3) and secure by tightening terminal screws (4) [see label near terminal block].
- (3)** Tighten two screws of wiring clamp (2) to secure wiring (1) in place.
- (4)** If track light unit is being powered by 115 VAC, no further connections need to be made. If track light unit is being powered by 230 VAC (nominal), disconnect wire (5) from transformer terminal (6) [115 VAC terminal] and reconnect to terminal (7) [230 VAC terminal].
- (5)** Install transformer cover (8) on base plate (9) and secure with four screws (10), making sure side of transformer cover with single wire cutout (A) is facing inward.

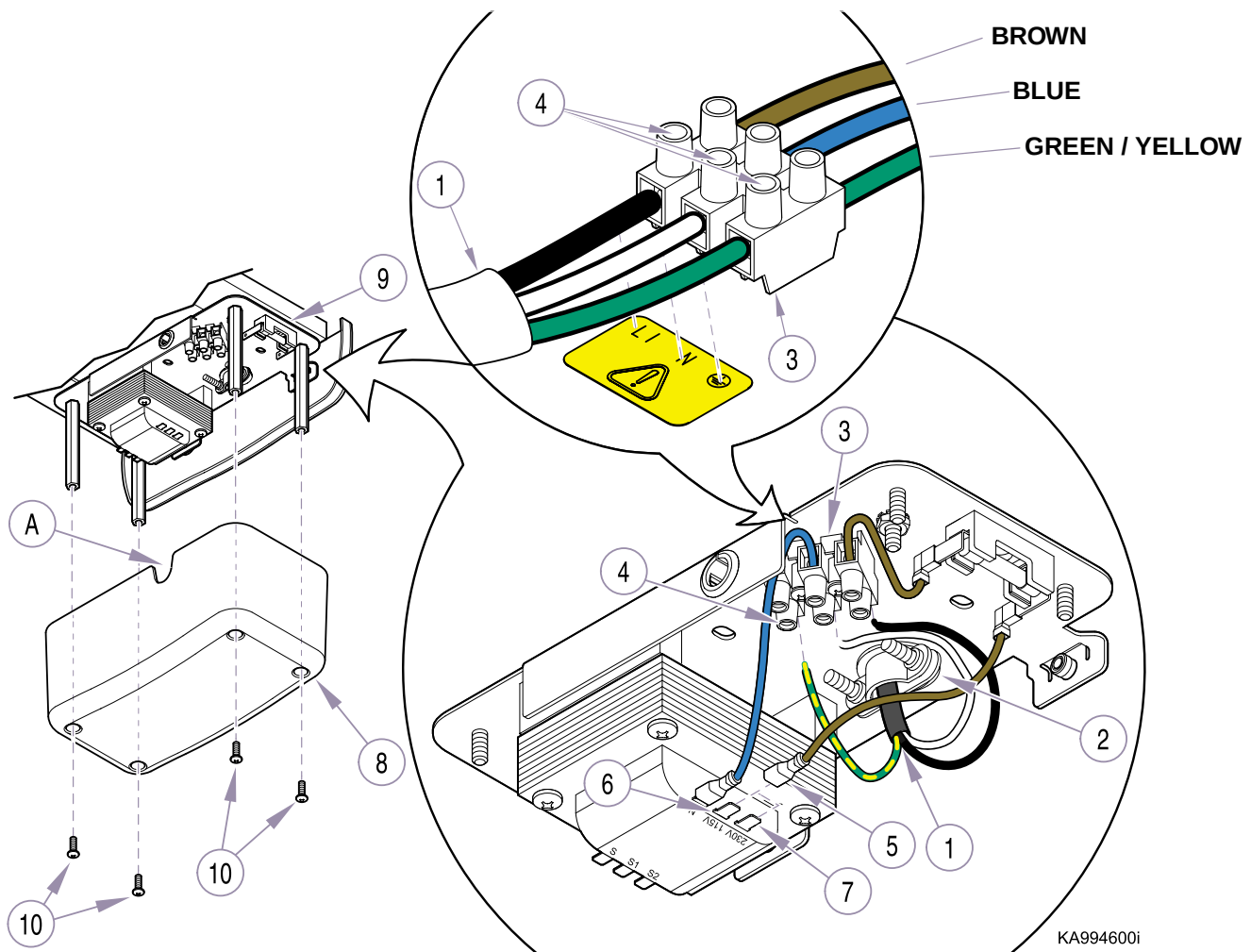


Figure 8. Wiring Connections

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TRACK LIGHT

INSTALLATION CHECKLIST

(See Figures 9 & 10)



Answering "NO" to any of the following questions indicates improper installation or a product malfunction. Check all connections, then refer to the Midmark Dental Light Service & Parts manual for corrective action if necessary.

Yes No

- ☐ ☐ With Facility Power ON (and light OFF)
When **Power Button** is pressed once,
does light illuminate?
- ☐ ☐ When **Power Button** is pressed twice, does
Auto-On Indicator Light illuminate?
- ☐ ☐ With **Auto-On** function selected, does light
illuminate when light arm is moved
below horizontal?
(Refer to User's Guide for adjustment).
- ☐ ☐ When **Power Button** is pressed three times,
does light shut off?

Yes No

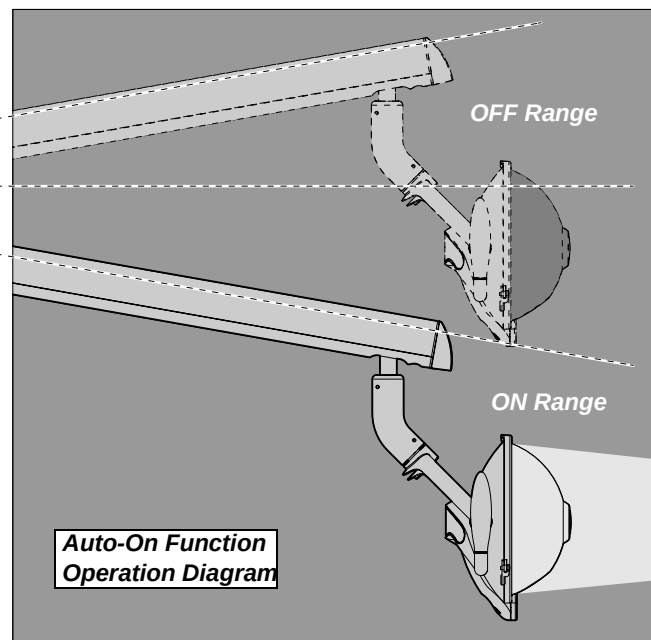
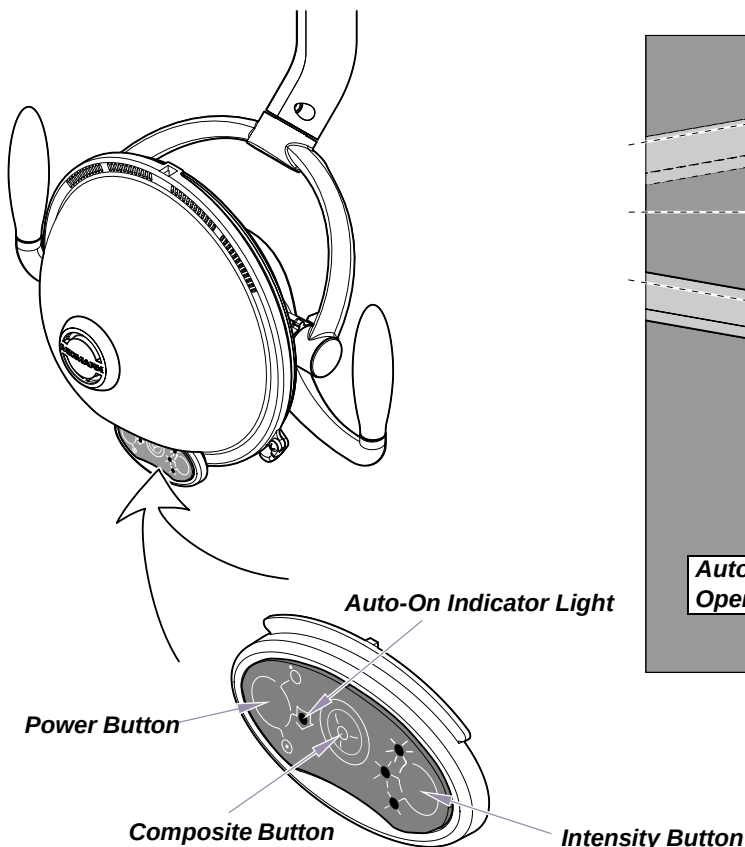
- ☐ ☐ When **Composite Button** is depressed,
does light become noticeably dimmer?
- ☐ ☐ Does **Intensity Button** adjust light beam to
three settings (High, Medium, Low)?



Answering "NO" to any of the following questions indicates an adjustment is necessary. Refer to the adjustment procedures in Figure 10.

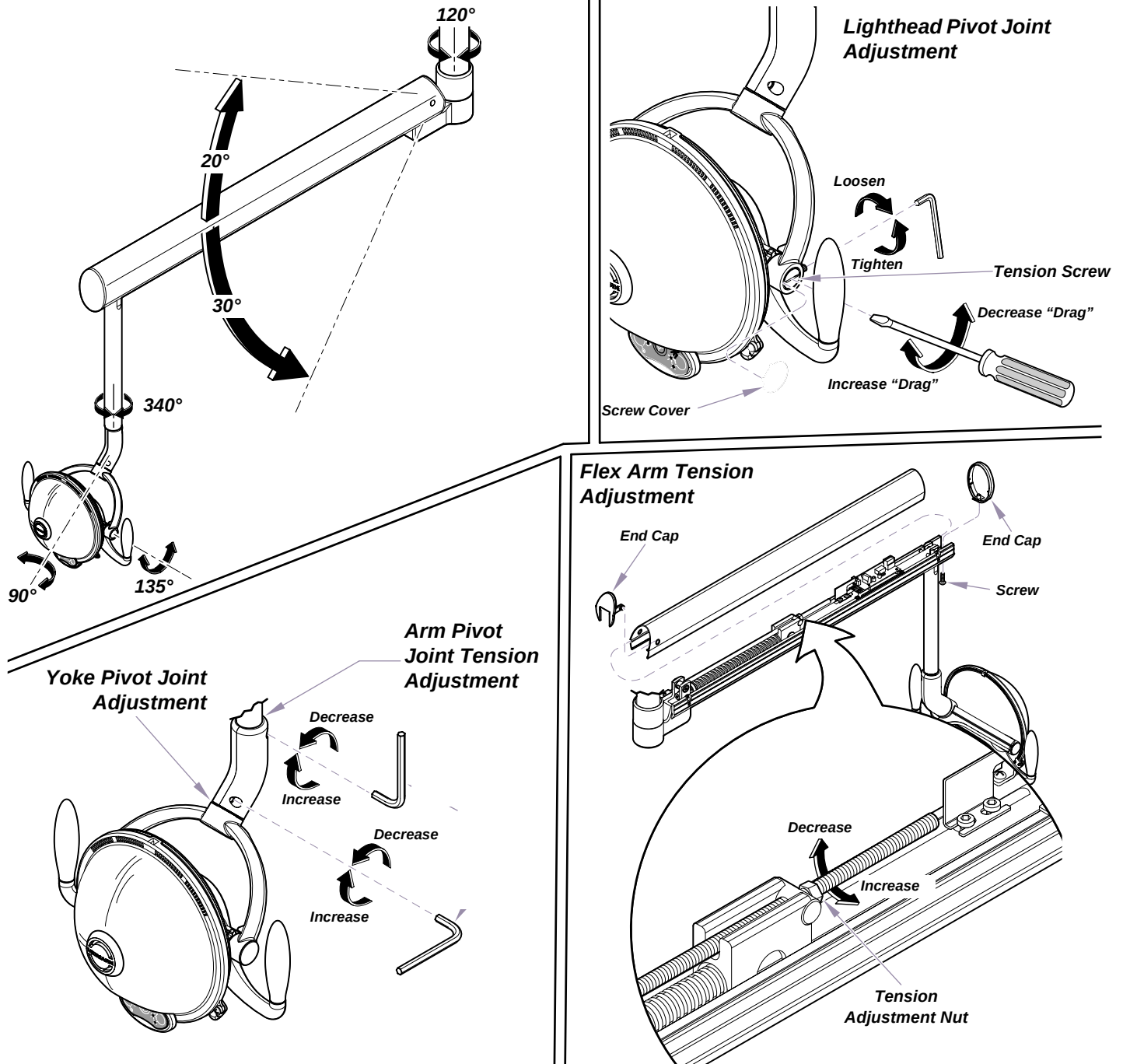
Yes No

- ☐ ☐ Does light move easily at all pivot points?
- ☐ ☐ Does **Flex Arm** stay in position without
"drifting"?
- ☐ ☐ Does lighthead stay in position (at all
pivot points) without "drifting"?



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Figure 9. Light Operation



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Figure 10. Lighthouse / Flex Arm Adjustment Procedures

TRACK LIGHT**SPECIFICATIONS****Description****Data**

Electrical Requirements: 115 / 230 VAC $\pm 10\%$,
50/60 HZ
1.2 / 0.6 amp, single phase

Bulb: 24 VAC, 150W, G 6.35 size,
2 pin prefocused, C-6 Oval filament,
Halogen Photo Optic Lamp

Fuse: Type 3AG, 1.5A, 250 VAC
1/4 x 1-1/4 in., Type T (Time Delay)

Weight (max.): 78 lbs (35.4 kgs)

Torque (max.): 25 ft-lbs. (33.9 N•m)

Power to Bulb

@ Maximum Intensity: 15.7 VAC, 5.5 amps

Classifications: Class 1, Type B, Applied Part,
Ordinary Equipment

Certifications:

Midmark Corporation ISO-9001

Complies to the applicable

requirements of: UL2601-1,
CAN/CSA 22.2, #601.1-M90,
MDD 93/42/EEC, Annex VII
[EN60601-1, EN60601-1-2]

Midmark Track Light Patent pending

**TRANSPORTATION / STORAGE
CONDITIONS**

- Ambient Temperature Range: -22°F to 140°F
(-30°C to 60°C)
- Relative Humidity 10% to 90%
(non-condensing)
- Atmospheric Pressure 500hPa to 1060
hPa (0.49atm to
1.05atm)

TORQUE SPECIFICATIONS

Torque specifications apply to hardware used on components unless otherwise noted in these installation instructions:

Torque Specifications**Hardware Size****Torque Values**

#6	11 to 21 inch / lbs. (1.2 to 2.3 N•m)
#8	20 to 30 inch / lbs. (2.2 to 3.3 N•m)
#10	32 to 42 inch / lbs. (3.6 to 4.8 N•m)
1/4 inch	75 to 85 inch / lbs. (8.5 to 9.6 N•m)
5/16 inch	18 to 22 ft. / lbs. (24.4 to 29.8 N•m)
3/8 inch	31 to 35 ft. / lbs. (42.0 to 47.5 N•m)
1/2 inch	50 to 60 ft. / lbs. (67.8 to 81.4 N•m)